

### **REMARKS**

Applicant has carefully considered the Final Office Action mailed August 18, 2009, and responds as follows. This Response accompanies a Request for Continued Examination.

Claims 1, 2, 4-16, 18-31, 45, 70-71, and 76-91 are pending. Claims 1 and 45 have been amended. Claims 78-91 have been added. Claims 1 and 45 are independent claims.

In the Office Action, the Examiner:

- rejected claims 1, 2, 4, 7, 12-15, 19-20, 26-28, 45, 70 and 71 under 35 USC § 102(b) as being anticipated by Leoni et al. (US 5,152,949);
- rejected claims 1, 2, 4, 7-15, 18-19, 21-23, 25-28, 45, 70-71 and 76-77 under 35 USC § 102(b) as being anticipated by Cartwright et al. (US 6,506,325);
- rejected claim 5 under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Fritz et al. (US 6,257,866);
- rejected claim 6 under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Fritz and further in view of Segen, Jr. (US 6,250,909);
- rejected claim 16 under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Palmer (US 4,942,013);
- rejected claim 24 under 35 USC § 103(a) as being unpatentable over Cartwright in view of Gibson (US 5,093,067); and
- rejected claims 29-31 under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Seemann (US 5,439,635).

#### ***Rejections under 35 USC § 102(b)***

(a) Claims 1, 2, 4, 7, 12-15, 19-20, 26-28, 45, 70 and 71 stand rejected under 35 USC § 102(b) as being anticipated by Leoni. Applicants respectfully traverse these rejections.

Amended claims 1 and 45 both recite, in part:

“said compression wall provides a physical obstacle to a deflection of said deformable member as the matrix is injected into said strengthener chamber.”

Support for these amendments can be found, for example, in FIGS. 11 and 12 and the corresponding disclosure at paragraphs [0096] and [0104] of the as-published application.

Leoni fails to disclose a compression wall that provides a physical obstacle to a deflection of a deformable member as matrix is injected into the strengthener chamber. Leoni discloses a bladder liner 36 (see Figure 1) that is everywhere uniformly biased against the conformable cauls 32 when the pressure chamber 38 is pressurized. The pressure in Leoni's pressure chamber 38 forces the bladder liner 36 against the conformable cauls 32, toward the rigid mold 14 and away from the cover 20. Leoni further discloses that when resin is injected into plenum 52, pressure chamber 38 is pressurized to a first predetermined pressure P1. In other words, Leoni's bladder liner 36 is forced against the conformable cauls 32, toward the rigid mold 14, and *away from cover 20* due to pressure P1 when the resin is injected into the plenum 52. Thus, Leoni's cover 20 does not provide a physical obstacle to the deflection of bladder liner 36 when the resin is injected into the plenum 52.

As Leoni fails to disclose each and every element of claims 1 and 45, and as claims 2, 4, 7, 12-15, 19-20, 26-28, 70 and 71 depend, directly or indirectly, from claim 1 and contain additional recitations thereto, Leoni fails to anticipate these claims.

(b) Claims 1, 2, 4, 7-15, 18-19, 21-23, 25-28, 45, 70-71 and 76-77 stand rejected under 35 USC § 102(b) as being anticipated by Cartwright. Applicants respectfully traverse these rejections.

Cartwright also fails to disclose a compression wall that provides a physical obstacle to a deflection of a deformable member as matrix is injected into the strengthener chamber, as required by both claims 1 and 45.

First, it is not clear if the Examiner is relying on Cartwright's Figure 1 or Figure 2 or both.

With respect to the embodiment disclosed by Cartwright in Figure 1, Cartwright discloses a fluid impervious bag 114 that is collapsed against the substrate 112 when a vacuum removes air from the mold cavity. (Col. 4, lines 37-40) Cartwright then discloses that the vacuum bagged substrate is immersed in a fluid 126. This fluid applies a uniform pressure against the substrate 112 towards the mold 110. Cartwright discloses that the uniform fluid pressure prevents the resin from inflating the bag. (Col. 5, lines 11-13) Cartwright's cap or lid 138 is not configured to contact the bag 114 when resin is injected into the mold. Thus, the embodiment of Cartwright's Figure 1 fails to disclose a compression wall that provides a physical obstacle to a deflection of a deformable member as matrix is injected into the strengthener chamber.

With respect to the embodiment disclosed by Cartwright in Figure 2, Cartwright discloses that "fluid controller 228 provides a fluid via lines 230, 232 in the space between bag 214 and 215." (Col. 5, lines 37-39) Thus, even if, *arguendo*, the bag 215 was to be considered a compression wall (which Applicants dispute), Cartwright discloses that the fluid controlled by controller 228 spaces bag 214 from 215. Thus, the embodiment of Cartwright's Figure 2 also fails disclose a compression wall that provides a physical obstacle to a deflection of a deformable member as matrix is injected into the strengthener chamber.

As Cartwright fails to disclose each and every element of claims 1 and 45, and as claims 2, 4, 7-15, 18-19, 21-23, 25-28, 70-71 and 76-77 depend, directly or indirectly, from claim 1 and contain additional recitations thereto, Cartwright fails to anticipate these claims.

***Rejections under 35 USC § 103(a)***

(a) Claim 5 stands rejected under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Fritz. Applicants respectfully traverse this rejection.

Fritz fails to cure the deficiencies of Leoni discussed above. Further, Fritz fails to cure the deficiencies of Cartwright discussed above. Thus, the combination of Leoni or Cartwright in view of Fritz fails to render claim 1 unpatentable. Claim 5 depends from

claim 1, and contains additional recitations thereto. Thus, the combination of Leoni or Cartwright in view of Fritz fails to render claim 5 unpatentable.

(b) Claim 6 stands rejected under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Fritz and further in view of Segen, Jr. Applicants respectfully traverse this rejection.

Neither Fritz nor Segen cure the deficiencies of Leoni discussed above. Further, neither Fritz nor Segen cure the deficiencies of Cartwright discussed above. Thus, the combination of Leoni or Cartwright in view of Fritz and further in view of Segen fails to render claim 1 unpatentable. Claim 6 depends from claim 1, and contains additional recitations thereto. Thus, the combination of Leoni or Cartwright in view of Fritz and further in view of Segen fails to render claim 6 unpatentable.

(c) Claim 16 stands rejected under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Palmer. Applicants respectfully traverse this rejection.

Palmer fails to cure the deficiencies of Leoni discussed above. Further, Palmer fails to cure the deficiencies of Cartwright discussed above. Thus, the combination of Leoni or Cartwright in view of Palmer fails to render claim 1 unpatentable. Claim 16 depends from claim 1, and contains additional recitations thereto. Thus, the combination of Leoni or Cartwright in view of Palmer fails to render claim 16 unpatentable.

(d) Claim 24 stands rejected under 35 USC § 103(a) as being unpatentable over Cartwright in view of Gibson. Applicants respectfully traverse this rejection.

Gibson fails to cure the deficiencies of Cartwright discussed above. Thus, the combination of Cartwright in view of Gibson fails to render claim 1 unpatentable. Claim 24 depends from claim 1, and contains additional recitations thereto. Thus, the combination of Cartwright in view of Gibson fails to render claim 24 unpatentable.

(e) Claims 29-31 stand rejected under 35 USC § 103(a) as being unpatentable over either Leoni or Cartwright in view of Seemann. Applicants respectfully traverse these rejections.

Seemann fails to cure the deficiencies of Leoni discussed above. Further, Seemann fails to cure the deficiencies of Cartwright discussed above. Thus, the combination of Leoni or Cartwright in view of Seemann fails to render claim 1 unpatentable. Claims 29-31 depends from claim 1, either directly or indirectly, and contain additional recitations thereto. Thus, the combination of Leoni or Cartwright in view of Seemann fails to render claims 29-31 unpatentable.

### ***New Claims***

Claims 78-84 depend from claim 1 and contain additional recitations thereto. Claims 85-91 depend from claim 45 and contain additional recitations thereto. Support for these claims can be found, for example, in FIGS. 11 and 12 and corresponding paragraphs [0096]-[0104] of the as-published application. No new matter has been introduced.

For at least the reason discussed above, Applicants respectfully submit that new claims 78-91 are patentable.

### ***Conclusion***

As every objection and rejection has been addressed by Applicants, Applicants believe that this application is in condition for allowance and respectfully request action to that effect.

Respectfully submitted,  
BANNER & WITCOFF, LTD.

Dated: December 18, 2009

By: /Jeanne M. Tanner/  
Jeanne M. Tanner  
Reg. No. 45,156

28 State St., Suite 1800  
Boston, MA 02109-1701  
617-720-9600